

Table S1 Equation about model-based weight probability scores for LMA sizes

Age	Size	Gender	Formula
Adults	3	Male	$\frac{e^{14.977-0.312*w}}{(1+e^{14.977-0.312*w}+e^{10.46-0.153*w}+e^{-16.184+0.123*w})}$
	3	Female	$\frac{e^{9.436-0.235*w}}{(1+e^{9.436-0.235*w}+e^{-15.053+0.189*w})}$
	4	Male	$\frac{e^{10.46-0.153*w}}{(1+e^{14.977-0.312*w}+e^{10.46-0.153*w}+e^{-16.184+0.123*w})}$
	4	Female	$\frac{1}{(1+e^{9.436-0.235*w}+e^{-15.053+0.189*w})}$
	5	Male	$\frac{1}{(1+e^{14.977-0.312*w}+e^{10.46-0.153*w}+e^{-16.184+0.123*w})}$
	5	Female	$\frac{e^{-15.053+0.189*w}}{(1+e^{9.436-0.235*w}+e^{-15.053+0.189*w})}$
Adolescents	6	Male	$\frac{e^{-16.184+0.123*w}}{(1+e^{14.977-0.312*w}+e^{10.46-0.153*w}+e^{-16.184+0.123*w})}$
	2.5	Male	$\frac{e^{24.597-0.688*w}}{(1+e^{24.597-0.688*w}+e^{12.948-0.267*w}+e^{-10.291+0.139*w})}$
	2.5	Female	$\frac{e^{32.625-0.942*w}}{(1+e^{32.625-0.942*w}+e^{13.074-0.277*w}+e^{-14.691+0.177*w})}$
	3	Male	$\frac{e^{12.948-0.267*w}}{(1+e^{24.597-0.688*w}+e^{12.948-0.267*w}+e^{-10.291+0.139*w})}$
	3	Female	$\frac{e^{13.074-0.277*w}}{(1+e^{32.625-0.942*w}+e^{13.074-0.277*w}+e^{-14.691+0.177*w})}$
	4	Male	$\frac{1}{(1+e^{24.597-0.688*w}+e^{12.948-0.267*w}+e^{-10.291+0.139*w})}$
	4	Female	$\frac{1}{(1+e^{32.625-0.942*w}+e^{13.074-0.277*w}+e^{-14.691+0.177*w})}$
	5	Male	$\frac{e^{-10.291+0.139*w}}{(1+e^{24.597-0.688*w}+e^{12.948-0.267*w}+e^{-10.291+0.139*w})}$
	5	Female	$\frac{e^{-14.691+0.177*w}}{(1+e^{32.625-0.942*w}+e^{13.074-0.277*w}+e^{-14.691+0.177*w})}$
	Children	1.5	Male
1.5		Female	$\frac{e^{7.082-0.729*w}}{(1+e^{7.082-0.729*w}+e^{-11.693+0.584*w}+e^{-23.859+0.977*w})}$
2		Male	$\frac{1}{(1+e^{7.782-0.803*w}+e^{-12.193+0.618*w}+e^{-23.526+0.981*w})}$
2		Female	$\frac{1}{(1+e^{7.082-0.729*w}+e^{-11.693+0.584*w}+e^{-23.859+0.977*w})}$
2.5		Male	$\frac{e^{-12.193+0.618*w}}{(1+e^{7.782-0.803*w}+e^{-12.193+0.618*w}+e^{-23.526+0.981*w})}$
2.5		Female	$\frac{e^{-11.693+0.584*w}}{(1+e^{7.082-0.729*w}+e^{-11.693+0.584*w}+e^{-23.859+0.977*w})}$
3		Male	$\frac{e^{-23.526+0.981*w}}{(1+e^{7.782-0.803*w}+e^{-12.193+0.618*w}+e^{-23.526+0.981*w})}$
3		Female	$\frac{e^{-23.859+0.977*w}}{(1+e^{7.082-0.729*w}+e^{-11.693+0.584*w}+e^{-23.859+0.977*w})}$

"w" represents weight in the above table. We used "mlogit" in STATA software to calculate the coefficient for the multi-nominal logistic regression model.